

Lecture Module - Sensors

ME3023 - Measurements in Mechanical Systems

Mechanical Engineering

Tennessee Technological University

Topic - Introduction and Overview

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- Classification of Sensors
- Analog and Digital Sensors
- Example 1: Distance or Range
- Example 2: Motion

Classification of Sensors

a **sensor**, a physical element that employs some natural phenomenon...
...to sense the variable being measured

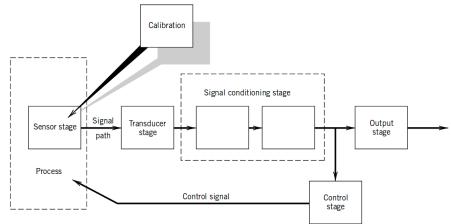
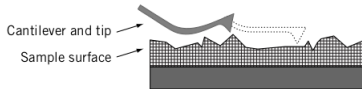


Figure 1.5 Components of a general measurement system.

Classification of Sensors

Generate ideas as a group.

Classification of Sensors

(space for more ideas)

Analog and Digital Sensors

Analog	Digital	Both?
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Example 1: Distance or Range

Thought Exercise: How do we measure distance (aka range)?

Example 1: Distance or Range

Example 2: Motion

Thought Exercise: How do we measure motion?

- What variable or quantity is used to describe motion?

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- What type of sensor is used to measure this?

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Example 2: Motion